REMARKS

In the March 24, 2009 Office Action, all of the claims stand rejected in view of prior art. No other objections or rejections were made in the Office Action.

Status of Claims and Amendments

None of the claims are being amended by the current Amendment. Thus, claims 1-22 are pending, with claims 1 and 15 being the only independent claims. Reexamination and reconsideration of the pending claims are respectfully requested in view of the following comments.

Information Disclosure Statements – 4th Request

KR1998-071723, which was cited in the November 21, 2007 Information Disclosure Statement, was not initialed as being considered on the form 1449 attached to the April 21, 2008 Office Action. Since US 5,927,093, which was also cited in this Information Disclosure Statement, is an English language counterpart of KR1998-071723 (and was submitted in lieu of translation) in accordance with M.P.E.P. §609.04(a) on page 600-153 of the M.P.E.P., Applicants respectfully request that this reference be initialed on form 1449 as being considered.

Also, Japanese 1998 Cooling and Heating Handbook, Air Conditioning Volume, Mitsubishi Heavy Industries, Ltd., which was cited in the May 30, 2006 Information Disclosure Statement, was not initialed as being considered on the form 1449 attached to the April 21, 2008 Office Action. Since a concise statement of the relevance of this publication was provided in the May 30, 2006 Information Disclosure Statement in accordance with M.P.E.P. §609.04(a) on page 600-153 of the M.P.E.P., Applicants respectfully request that this reference be initialed on form 1449 as being considered.

Rejections - 35 U.S.C. § 103

On pages 2-8 of the Office Action, claims 1-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Publication No. 2003-262435(Kishimoto) in view of Japanese Patent Publication No. 2002-276970 (Tamura). In response, Applicants respectfully traverse this rejection as explained below.

Independent claims 1 and 15 require, *inter alia*, a first branch nozzle part connected to said first outlet pipe part and extending along said first direction to a first tip part with a first free end aligned with said first outlet pipe part, the first tip part having a flared part; a second branch nozzle part connected to said second outlet pipe part and extending along said first direction to a reducer pipe connecting part with a second free end aligned with said second outlet pipe part, said second free end being spaced a distance in said first direction from said first free end of said first tip part, and said reducer pipe connecting part having a pipe diameter that reduces in steps as the second free end is approached; and a first branch pipe with an end received in the flared part and connected to said first tip part of said first branch nozzle, said first branch pipe being bent so that another end faces a direction that intersects said first direction in a state in which said first branch pipe is connected to said first branch nozzle part within said flared part, and said first branch pipe having a maximum length measured along said first direction that is smaller than said distance between said first and second free ends such that said reducer pipe connecting part projects in said first direction beyond said first branch pipe. Contrary to the assertions of the Office Action, this unique arrangement is not disclosed or suggested by the Kishimoto publication and/or the Tamura publication, singularly or in combination, as explained below.

As argued previously, the Kishimoto publication (JP2003-262435), at best, only discloses one branch nozzle part having a free end aligned with the first outlet pipe part, **not** two such branch nozzle parts. Moreover, the Kishimoto publication (JP2003-262435) does not disclose a combination of a flared end on one branch nozzle part and a reducer pipe part on the other branch nozzle part, or such ends being axially spaced, as now claimed and best understood from Figures 4 and 8 of the instant application. The Tamura publication (JP2002-276970) is merely relied upon to disclose heat insulating material 7, which the Office Action alleges would cover the branching pipe joint as previously claimed. However, the Tamura publication (JP2002-276970) suffers from the same deficiencies as the Kishimoto publication (JP2003-262435) with respect to independent claims 1 and 15. Thus, even if one of ordinary skill in the art combined the Kishimoto publication (JP2003-262435) and the Tamura publication (JP2002-276970) as suggested in the Office Action, such a hypothetical combination would not result in the unique arrangements of independent claims 1 and 15.

In response to these arguments, the Office Action asserts that aligning the pipe in a curve way or a straight way is an obvious design choice, since there is no criticality or unexpected result from it; and that Figure 5 of the Kishimoto publication shows that the connection pipe part 43 can be aligned with the second outlet pipe 32 and therefore it is an obvious design choice for aligning the pipe connection with respect to the same component because there is no criticality or unexpected result. Applicants respectfully disagree.

First, the prior art teaches away from modifications suggested by the Office Action. In particular, the Kishimoto publication discloses ***either*** (1) a first flared end on a first nozzle part in Figure 2 ***or*** (2) a second free end aligned with a second nozzle part 23 in Figure 5; and the Kishimoto publication teaches away from combining these features. Specifically, the embodiment in Figure 4 of the Kishimoto publication specifically states that a purpose is to eliminate the relay piping (28) from the embodiment illustrated in Figure 2. See Paragraph [0026] of the translation of the Kishimoto publication. Then, in paragraphs [0028] and [0029] of the translation of the Kishimoto publication, this reference teaches that the 3rd embodiment of Figure 5 uses a composition of the first channel 13 that is the same as the second embodiment (Figure 4) and other composition that is the same as the first embodiment (Figure 2). Therefore, this reference specifically teaches away from combining the embodiments illustrated in Figures 2 and 5 as suggested by the Office Action. Accordingly, the Kishimoto publication cannot suggest the combination set forth in independent claims, and withdrawal of this rejection of independent claims 1 and 15 is respectfully requested.

Under U.S. patent law, the mere fact that the prior art can be modified does ***not*** make the modification obvious, unless an ***apparent reason*** exists based on evidence in the record or scientific reasoning for one of ordinary skill in the art to make the modification. See, KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741 (2007). The KSR Court noted that obviousness cannot be proven merely by showing that the elements of a claimed device were known in the prior art; it must be shown that those of ordinary skill in the art would have had some "apparent reason to combine the known elements in the fashion claimed." Id. at 1741. In this case, the current record lacks any apparent reason, suggestion or expectation of success for modifying the device of the Kishimoto publication to create Applicants' unique arrangement of independent claims 1 and 15, and in fact teaches away from such a modification as explained above.

Accordingly, withdrawal of this rejection of independent claims 1 and 15 is respectfully requested.

Second, with respect to the Office Action assertion that aligning the pipe in a curve way or a straight way is an obvious design choice, since there is no criticality or unexpected result from it; and that Figure 5 of the Kishimoto publication shows that the connection pipe part 43 can be aligned with the second outlet pipe 32 and therefore it is an obvious design choice for aligning the pipe connection with respect to the same component because there is no criticality or unexpected result, Applicants respectfully disagree.

The instant application sets forth advantages to the claimed arrangement. In other words, the claimed features are not arbitrary and not obvious design choices made for specific reasons. For example, the instant application states the following on page 11:

> At the tip part of the second branch nozzle part 184 a second reducer pipe connecting part 184a is formed, wherein the pipe diameter changes in steps. Furthermore, the second reducer pipe connecting part 184a protrudes further than the tip part (specifically, the first flared part 183a) of the first branch nozzle part 183 toward the first direction A side. Thereby, it is possible to secure a space around the circumference of the second reducer pipe connecting part 184a for performing the cutting work with the pipe cutter.

Additionally, the instant application states the following on page 11:

> Furthermore, unlike the conventional Y-shaped branch pipe 81 (refer to FIG. 2), the branching pipe joint 181 of the present embodiment does not need to secure space around the tip part of the first branch nozzle part 183 to perform the work of cutting such using a pipe cutter, and a spacing S between the first branch nozzle part 183 and the second branch nozzle part 184 (i.e., the spacing between the portion of the first flared part 183a of the first branch nozzle part 183 nearest the second branch nozzle part 184 side and the portion of the second branch nozzle part 184 nearest the first flared part 183a of the first branch nozzle part 183) can consequently be reduced to less than or equal to 40 mm. Thereby, the vicinity of the branch part 182 of the branching pipe joint 181 of the present embodiment can be compacted more that the conventional Y-shaped branch pipe 81 (refer to FIG. 2), the size of the heat insulating material 185 can be reduced when affixing such to the branching pipe joint 181, and the troublesome work when performing the

> racking process at the outer circumference of the heat insulating material 185 can be reduced.

There are an infinite number of ways to connect piping and air condition units. However, Applicants have invented an improved method and structure out of the infinite possibilities, which advantages are discussed in the instant application, the above excerpts in particular. The attached "Exhibit A" further demonstrates the importance of the method of installation of a pipe joint and structure of the pipe joint as set forth in independent claims 1 and 15 when connecting a plurality of air conditioning units. Thus, based on the above, the Office Action assertion that there is no criticality or unexpected result from the claimed arrangements is false. Moreover, based on the above, the Office Action assertions that the claimed arrangements are obvious design choices are also false. Finally, Applicants are not required to show some criticality or importance of claimed elements or arrangements. Rather, the burden is on the U.S. Patent and Trademark Office to give all claim limitations and combinations thereof appropriate patentable weight; compare the claimed subject matter to the prior art; and make a determination of patentability based on the teachings in the prior art and the general knowledge in the art. In this case, the Office Action falsely asserts that the claimed arrangements are somehow unimportant, and therefore would obvious. Such a position is untenable, especially in view of the above axplanation and the attached "Exhibit A."

Furthermore, under U.S. patent law, the mere fact that the prior art can be modified does ***not*** make the modification obvious, unless an ***apparent reason*** exists based on evidence in the record or scientific reasoning for one of ordinary skill in the art to make the modification. See, KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741 (2007). The KSR Court noted that obviousness cannot be proven merely by showing that the elements of a claimed device were known in the prior art; it must be shown that those of ordinary skill in the art would have had some "apparent reason to combine the known elements in the fashion claimed." Id. at 1741. In this case, the current record lacks any apparent reason, suggestion or expectation of success for modifying the device of the Kishimoto publication to result in the piping structure claimed. In fact, the Office Action merely asserts that certain features are obvious design choices due to a perceived lack of criticality or unexpected result. This reasoning is flawed because the Office Action does not provide an appropriate reason for modifying the prior art, especially in view of the teachings in the Kishimoto publication away from the alleged modification, as explained

above. Accordingly, withdrawal of this rejection of independent claims 1 and 15 is respectfully requested.

Independent claim 15 further requires, *inter alia,* connecting said branching pipe joint to said union connecting piping in accordance with a number of said outdoor units prior to connecting said first branch pipe to said branching pipe joint, said branching pipe joint being connected to said union connecting piping in a horizontal arrangement so that said first branch nozzle part and said second branch nozzle part serve as a horizontal branch arrangement at a common height position; and connecting said first branch pipe to said first branch nozzle such that said other end part of said first branch pipe is horizontally disposed relative at the common height position of said first and second branch nozzle parts, and subsequently moving said first branch pipe relative to said first branch nozzle part to a height position spaced from said common height position in order to connect said union connecting piping to a connection port of one of said outdoor units that is disposed at the height position spaced from the common height position. Applicants further believe that this unique arrangement is not disclosed or suggested by the Kishimoto publication and/or the Tamura publication, whether taken singularly or in combination, as explained below.

The Kishimoto publication (JP2003-262435) does not indicate the branching method of independent claim 15. Moreover, paragraph [0018] of the Kishimoto publication indicates "The bottom branch pipe 23 is arranged at the state where it inclined to the level surface, and the 2nd end connection 27 is in a position higher than the 4th end connection 32." Thus, the branching method of the Kishimoto publication ***teaches away*** from the horizontal branch arrangement of the Y-pipe shaped branch part of independent claim 15. Accordingly, withdrawal of this rejection of independent claim 15 is respectfully requested.

Moreover, Applicants believe that dependent claims 2-14 and 16-22 are also allowable over the prior art of record in that they depend from independent claim 1 or 15, and therefore are allowable for the reasons stated above. Also, dependent claims 2-14 and 16-22 are further allowable because they include additional limitations, which in combination with the features of independent claims 1 and 15, are not disclosed or suggested in the prior art. Therefore, Applicants respectfully request that this rejection of dependent claims 2-14 and 16-22 be withdrawn in view of the above comments.

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In view of the foregoing comments, Applicants respectfully assert that claims 1-22 are in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested. If there are any questions regarding this Request for Reconsideration, please feel free to contact the undersigned.

Respectfully submitted,

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